

ABSTRACT

Disclosed are an electrolytic copper plating solution containing a specific sulfur-containing compound and a thiol-reactive compound, and an electrolytic copper plating process using such an electrolytic copper plating solution. The present invention can prevent the copper layer on the resulting composite material from forming aggregation and, when the plating is intended to fill vias, make it possible to achieve the via-filling without voids. The present invention also relates to a method for controlling the electrolytic copper plating solution by using an amount of a specific decomposition product of the sulfur-containing compound as an index.